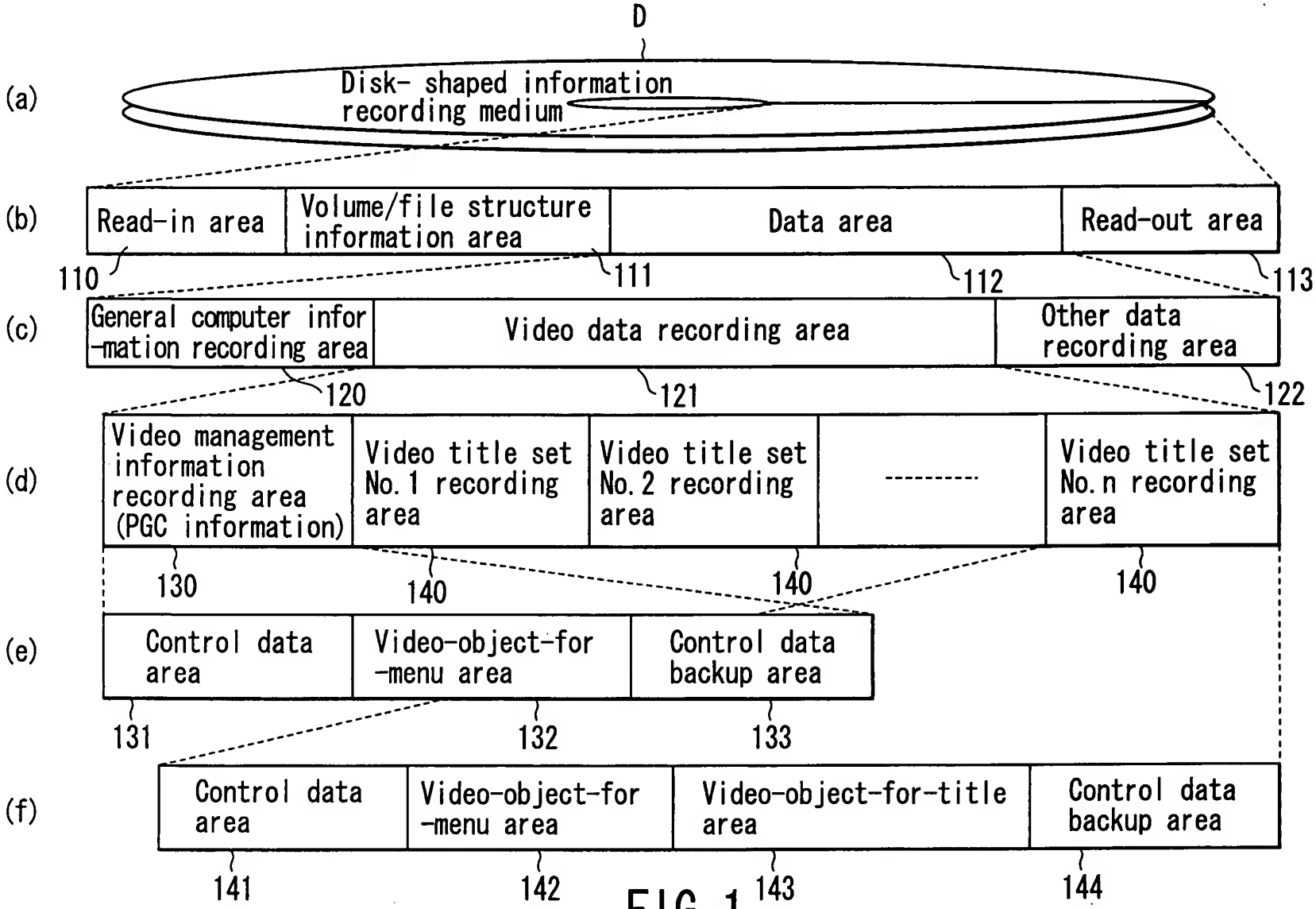
D
(a)
Disk- shaped information recording medium
(b)
Read-in area
Volume/file structure information area
Data area
Read-out area
110
111
112
113
(c)
General computer infor -mation recording area
Video data recording area
Other data recording area
120
121
122
(d)
Video management information recording area (PGC information)
Video title set No. 1 recording area
Video title set No. 2 recording area

Video title set No. n recording area
130
140
140
140
(e)
Control data area
Video-object-for -menu area
Control data backup area
131
132
133
(f)
Control data area
Video-object-for -menu area
Video-object-for-title area
Control data backup area
141
142
143
144

FIG. 1

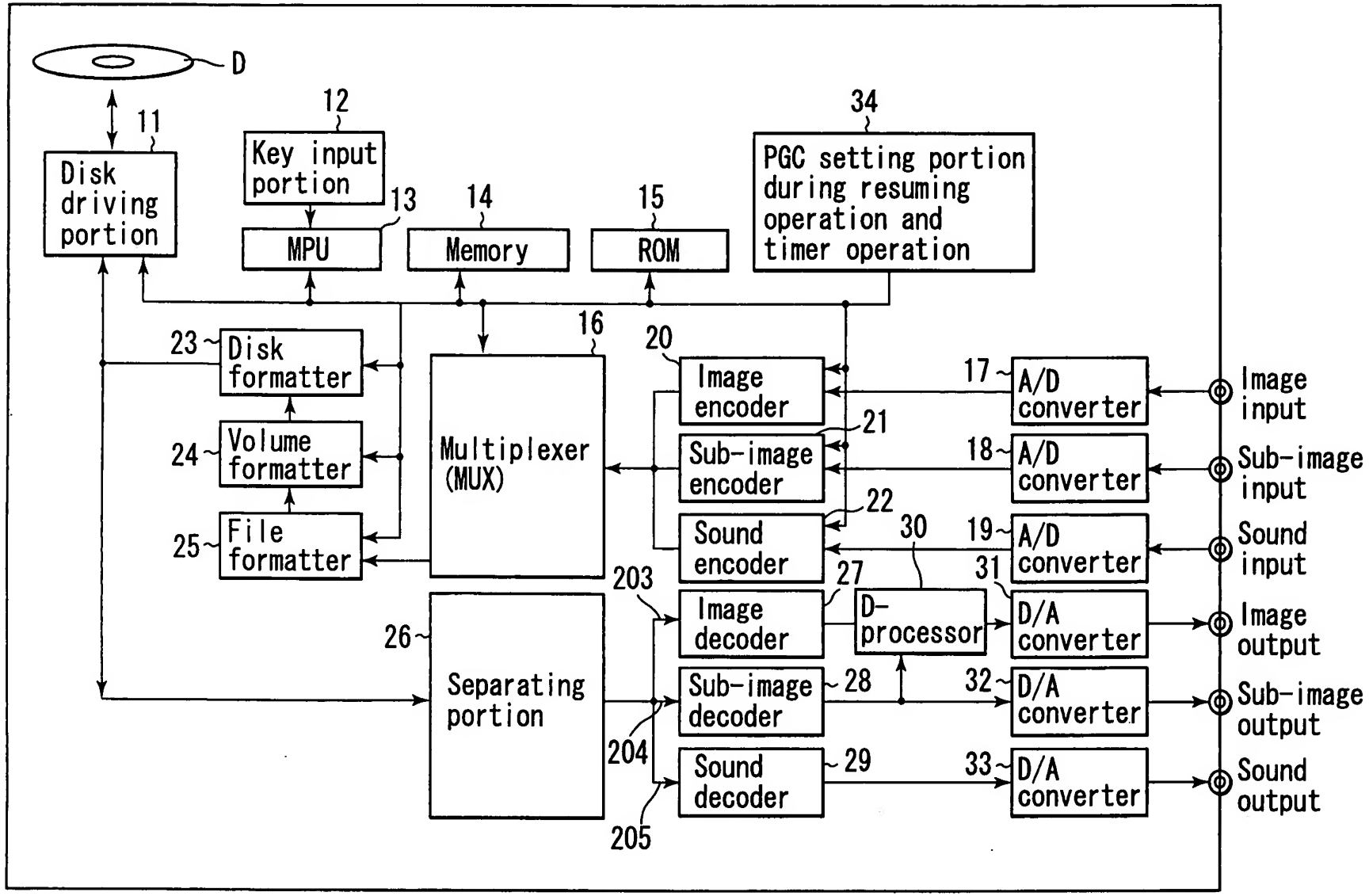
D
11
Disk driving portion
12
Key input portion
13
MPU
14
Memory
15
ROM
34
PGC setting portion during resuming operation and timer operation
16
23
Disk formatter
24
Volume formatter
25
File formatter
Multiplexer (MUX)
20
Image encoder
21
Sub-image encoder
22
Sound encoder
17
A/D converter
18
A/D converter
19
A/D converter
Image input
Sub-image input
Sound input
30
27
31
203
Image decoder
D-processor
D/A converter
Image output
26
Separating portion
Sub-image decoder
28
32
D/A converter
Sub-image output
204
Sound decoder
29
33
D/A converter
Sound output
205

FIG. 2

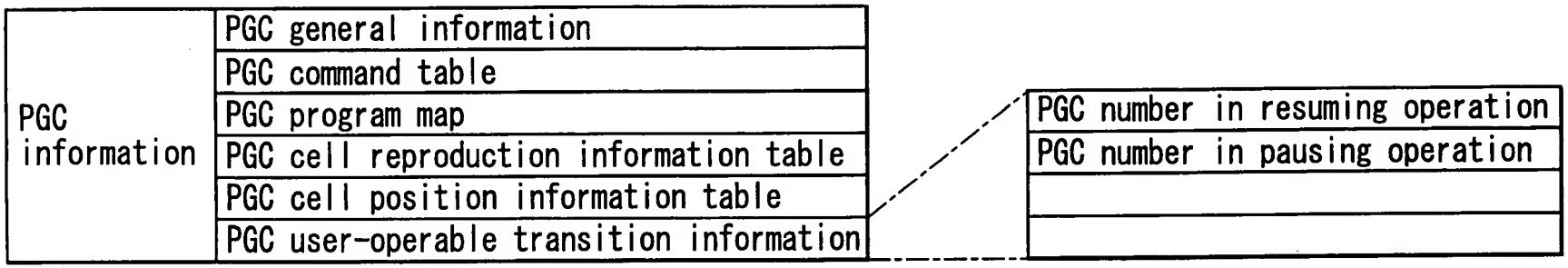
PGC information
PGC general information
PGC command table
PGC program map
PGC cell reproduction information table
PGC cell position information table
PGC user-operable transition information
PGC number in resuming operation
PGC number in pausing operation

FIG. 3

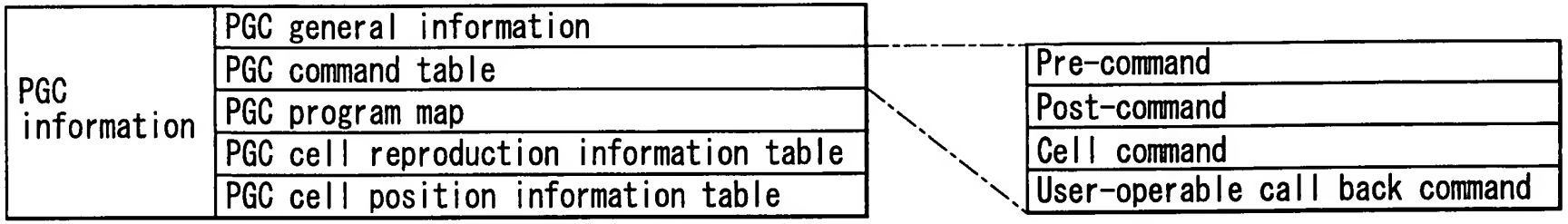
PGC information
PGC general information
PGC command table
PGC program map
PGC cell reproduction information table
PGC cell position information table
Pre-command
Post-command
Cell command
User-operable call back command

FIG. 5

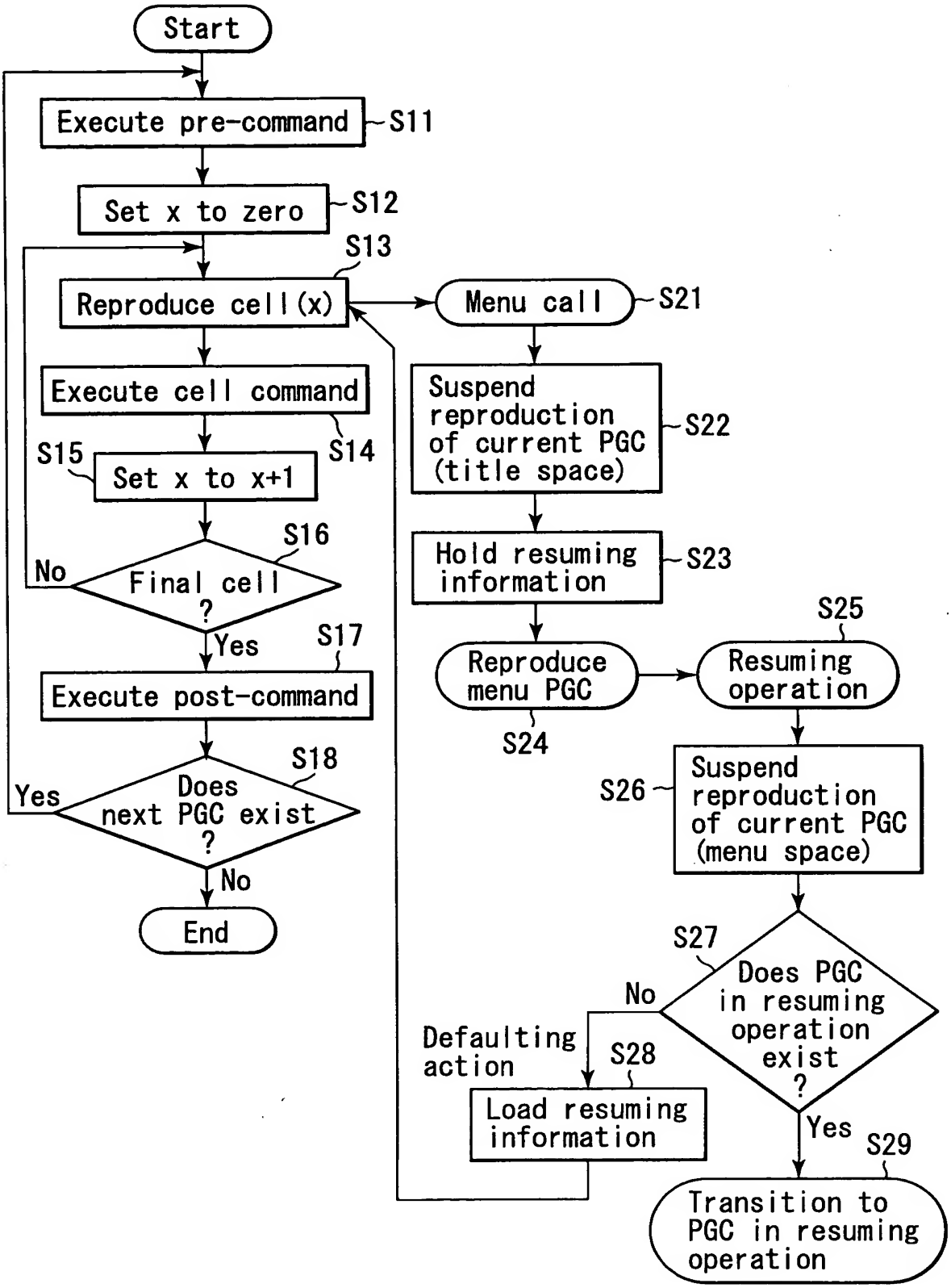
Start
Execute pre-command
S11
Set x to zero
S12
S13
Reproduce cell(x)
Menu call
S21
Execute cell command
S14
Suspend reproduction of current PGC (title space)
S22
S15
Set x to x+1
Hold resuming information
S23
S16
No
Final cell ?
Yes
S17
Execute post-command
S25
Reproduce menu PGC
Resuming operation
S24
S18
Yes
Does next PGC exist ?
No
S26
Suspend reproduction of current PGC (menu space)
End
S27
Does PGC in resuming operation exist ?
No
Defaulting action
S28
Load resuming information
Yes
S29
Transition to PGC in resuming operation

FIG. 4

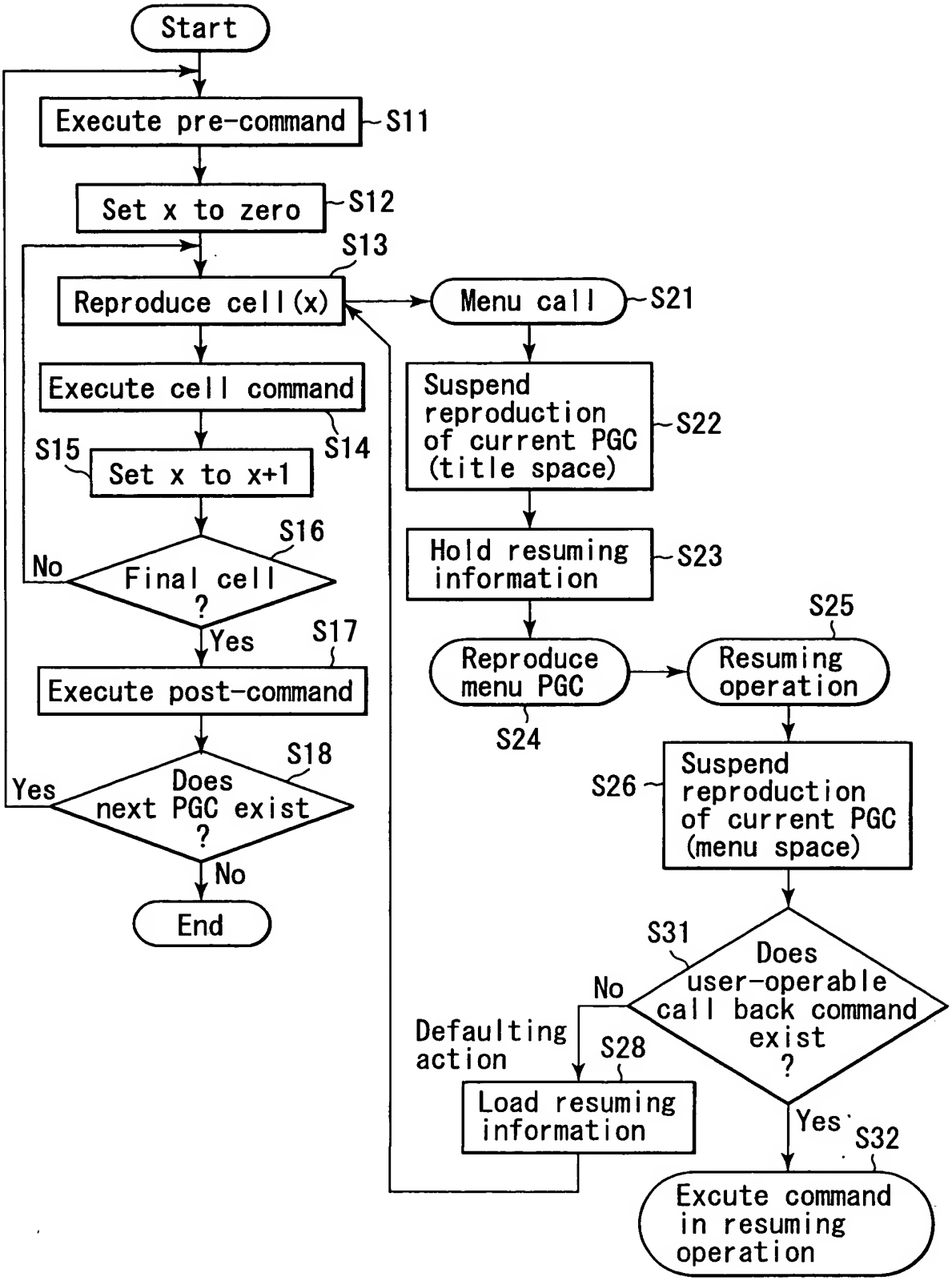
Start
Execute pre-command
S11
Set x to zero
S12
S13
Reproduce cell(x)
Menu call
S21
Execute cell command
S14
Suspend reproduction of current PGC (title space)
S22
S15
Set x to x+1
S16
No
Final cell ?
Hold resuming information
S23
Yes
S17
S25
Execute post-command
Reproduce menu PGC
Resuming operation
S24
S18
Yes
Does next PGC exist ?
S26
Suspend reproduction of current PGC (menu space)
No
End
S31
Does user-operable call back command exist ?
No
Defaulting action
S28
Load resuming information
Yes
S32
Excute command in resuming operation

FIG. 6

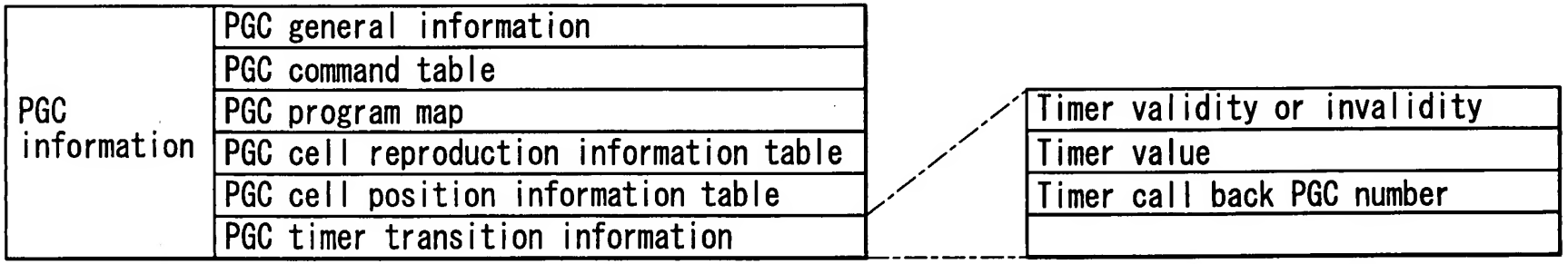
PGC information
PGC general information
PGC command table
PGC program map
PGC cell reproduction information table
PGC cell position information table
PGC timer transition information
Timer validity or invalidity
Timer value
Timer call back PGC number

FIG. 7

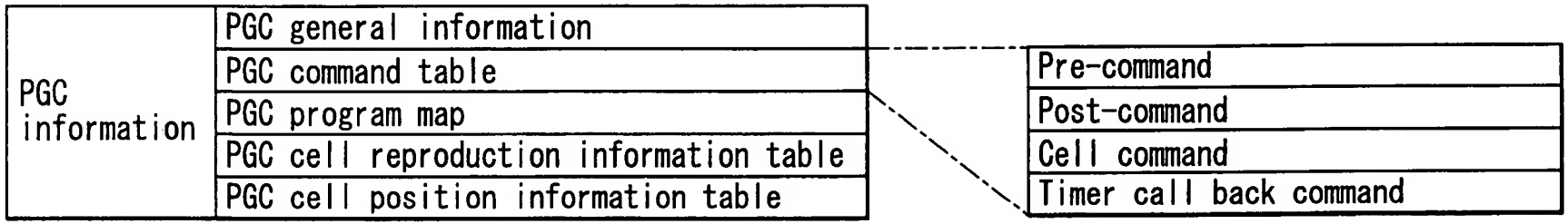
PGC information
PGC general information
PGC command table
PGC program map
PGC cell reproduction information table
PGC cell position information table
Pre-command
Post-command
Cell command
Timer call back command

FIG. 9

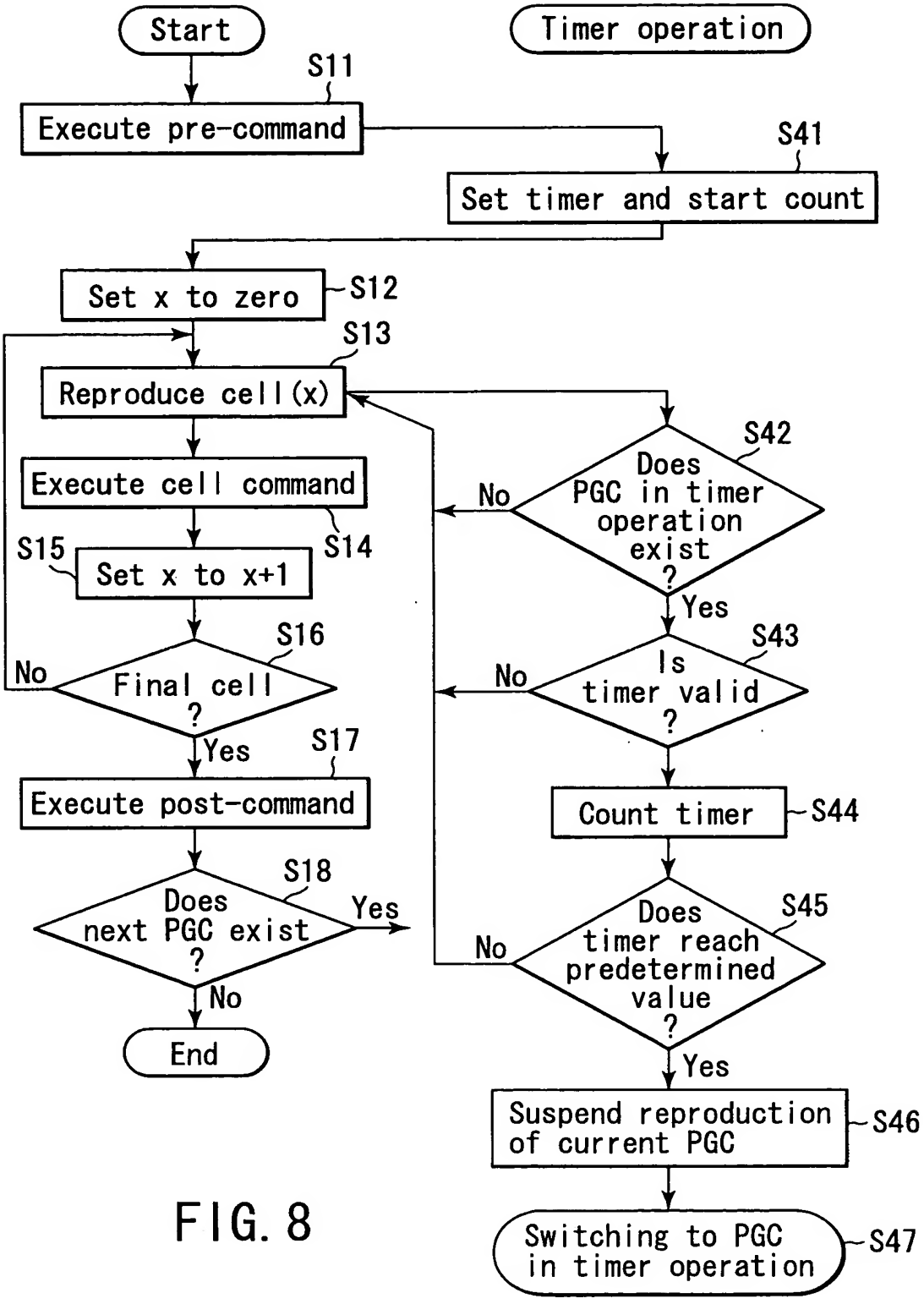
Start
Timer operation
S11
Execute pre-command
S41
Set timer and start count
Set x to zero
S12
S13
Reproduce cell(x)
Execute cell command
S14
S15
Set x to x+1
S16
No
Final cell ?
Yes
S17
Execute post-command
S18
Does next PGC exist ?
Yes
No
End
S42
Does PGC in timer operation exist ?
No
Yes
S43
Is timer valid ?
No
Count timer
S44
S45
Does timer reach predetermined value ?
No
Yes
Suspend reproduction of current PGC
S46
Switching to PGC in timer operation
S47

FIG. 8

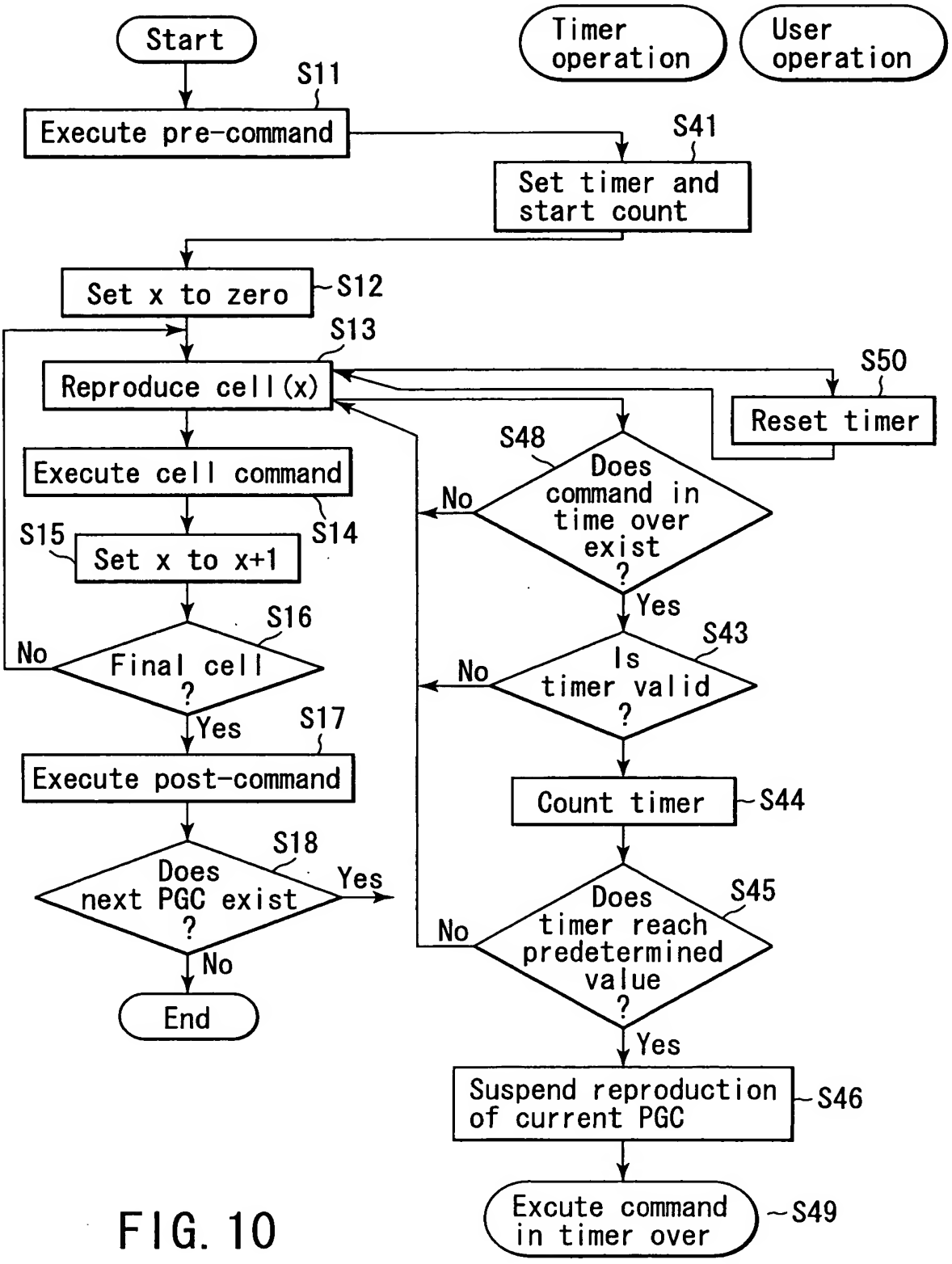
Start
Timer operation
User operation
S11
Execute pre-command
S41
Set timer and start count
Set x to zero
S12
S13
Reproduce cell(x)
S50
Reset timer
S48
Does command in time over exist ?
No
Yes
Execute cell command
S14
S15
Set x to x+1
S16
No
Final cell ?
Yes
S43
Is timer valid ?
No
S17
Execute post-command
Count timer
S44
S18
Does next PGC exist ?
Yes
No
S45
Does timer reach predetermined value ?
No
Yes
End
Suspend reproduction of current PGC
S46
Excute command in timer over
S49

FIG. 10

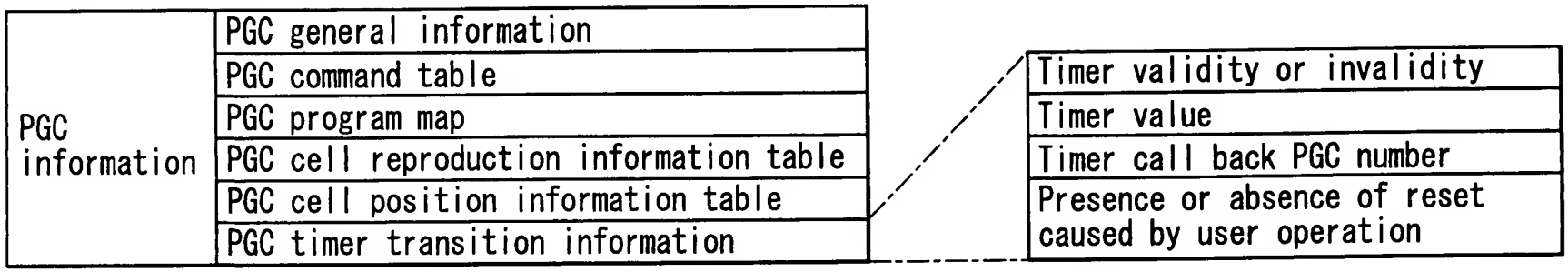
PGC information
PGC general information
PGC command table
PGC program map
PGC cell reproduction information table
PGC cell position information table
PGC timer transition information
Timer validity or invalidity
Timer value
Timer call back PGC number
Presence or absence of reset caused by user operation

FIG. 11

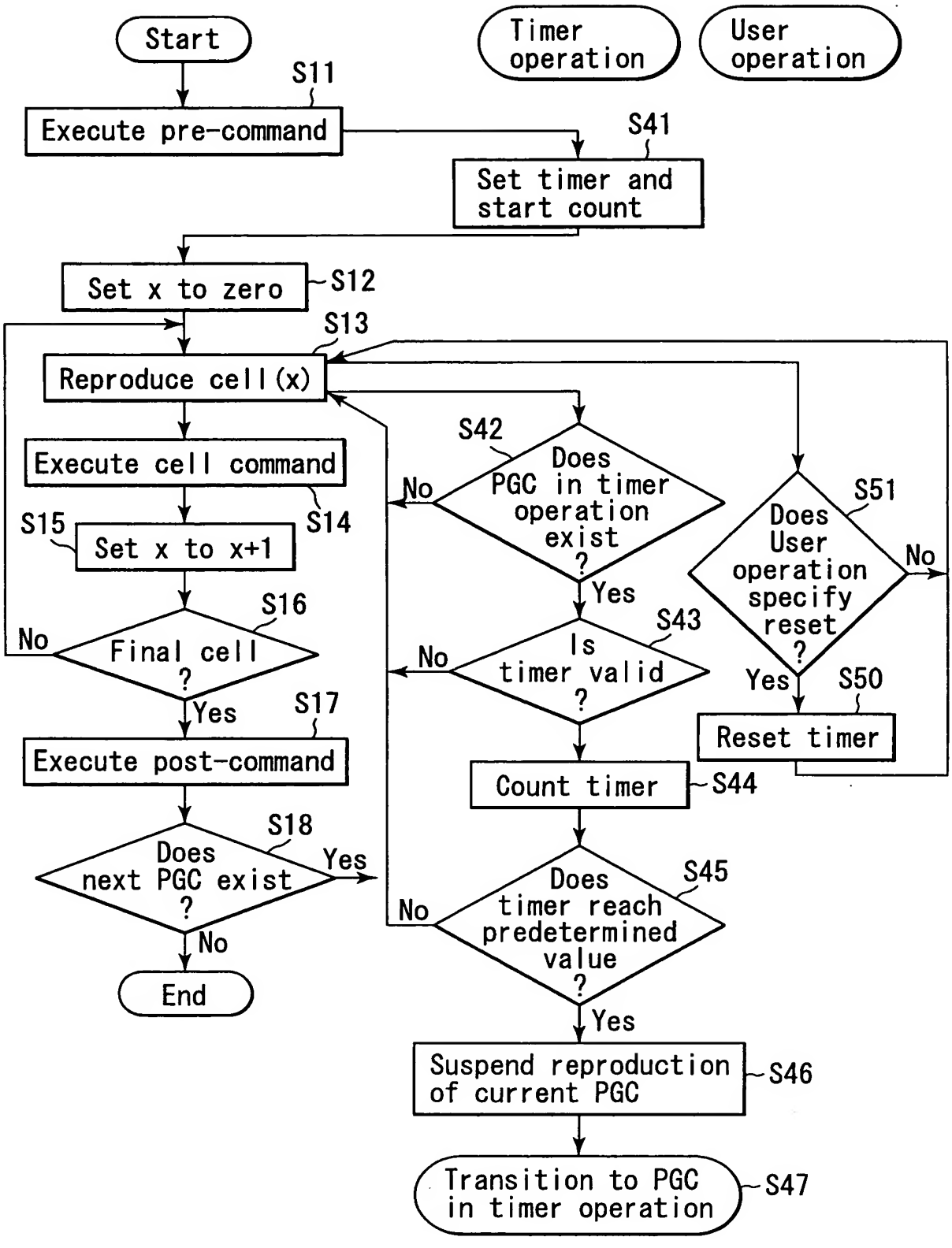
Start
Timer operation
User operation
S11
Execute pre-command
S41
Set timer and start count
Set x to zero
S12
S13
Reproduce cell (x)
Execute cell command
S14
S15
Set x to x+1
S16
No
Final cell ?
Yes
S17
Execute post-command
S18
Does next PGC exist ?
Yes
No
End
S42
No
Does PGC in timer operation exist ?
Yes
S43
No
Is timer valid ?
S51
Does User operation specify reset ?
No
Yes
S50
Reset timer
Count timer
S44
S45
No
Does timer reach predetermined value ?
Yes
Suspend reproduction of current PGC
S46
Transition to PGC in timer operation
S47

FIG. 12